

PROJECT FOR A BETTER KNOWLEDGE ON  
FOODS COMPOSITION IN CENTRAL AND WESTERN AFRICA

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The knowledge of foods composition has a great importance in various areas such as public health, epidemiology, nutrition, individual and collective dietetics. Knowledge on nutritive value of foods take place in food policy of states and international organizations, and are also useful in production and transformation of foods, particularly in food industries.

Because of these reasons, the need of information on nutritive value of foods is deeply expressed in Western and Central Africa. As a matter of fact this region has to face great problems of alimentation and nutrition. Due to demographic expansion and the necessity to improve nutritional status of populations, governments have to plan food supplies many years in advance. Besides, important changes are taking place in food habits, with heavy economic and cultural consequences. Finally, food industries are expanding fastly in these areas.

What sources then exist regarding this great need for information?

To our knowledge, there are :

- 1)- the FAO food composition table for Africa, edited in 1968 and 1970,
- 2)- some national tables,
- 3)- some punctual, and time scattered studies are undergone in different countries and in various organisms (Research Institutes, Universities...). All of these studies usually are not published.

The FAO table is a very useful document. But it is more than 20 years old. Except for energetic constituents, nutrients taken into

account are not numerically sufficient: there are only three minerals, five vitamins, one amino acid. Carbohydrates are calculated globally by difference instead of direct quantity determination. Values given for "cellulose" correspond to "crude fibre", which is quite different to what is now considered as "dietetic fibre". On the other hand, some Western and Central african foods are not mentioned in the FAO table. In addition, when a food is mentioned, the composition which is given is not necessarily valuable for all african regions where this food is met; due to differences in soil, climate, processing or preservation techniques, regional variations of composition may arise. Finally, for foods and ingredients taken into account in FAO table, many data are absent.

National tables have been established by a few countries. At the moment, we have not yet drawn up the list of these countries. Except for some specific analysis of local foods, to our knowledge, these tables arise essentially from the compilations of other tables and documents, sometimes not up to date or which are not always relative to the country concerned.

Results of punctual studies are sometimes difficult to be obtained and to exploit. It's not suitable to use them alone, but it is always suitable to compare them to other similar data.

Without being exhaustive (systematic research of realised studies has not been yet undertaken), there exist, in our knowledge for Western and Central Africa: works of ORANA of Dakar, ORSTOM, N'gaoundere University Centre, University of Yaounde, and Nigerian Universities. Many other works have certainly been done and they should be recorded (CIRAD, Tropical Products Institute, IITA of Ibadan, Universities, Institutes of Foods Technology etc...).

In response to their needs of information about food composition, various countries, in the world, are making up their own national data bank, in collaboration with each other through INFOODS, an International Network of Nutritional data bank. This is the case of France with CIQUAL, in collaboration with INRA and ORSTOM. CIQUAL is in charge of carrying out this work. After many years of work, conditions for the constitution of the bank have been determined, methods have been tested, and a management software , under installation, will be operational at the end of the year 1988.

Advantage should be taken of the experience gained by CIQUAL in the field of data bank and by ORSTOM in that of tropical foods to create also, in Africa, a data bank and tables of foods composition. In view of the extent of the work, it is absolutely necessary for several teams and countries to join efforts, with, as far as possible, help of International Organizations such as ECC (European Community Commission), INFOODS; and others... That's why, in the same way , a project has been set up for Western and Central Africa, with the participation of a number of african and european teams and laboratories :

- Four laboratories in Africa (Cameroon, Congo, Senegal and Togo) and four others in Europe (France, Great Britain, Italy, Netherland); all these laboratories already practice bromatology analysis or food technology studies and are well versed in tropical foods,
- Institute of Hygiene and Tropical Medecine of Lisbonne,
- CIQUAL of Paris.

The outlines of the program are as follows:

- \*- Inventory and accurate identification of foods by local teams (survey reports of food consumption inquiries may constitute the

basis for food census), and codification according to an international system (INFOODS or FFV),

- \*- Research of data on the composition of these foods (literature, unpublished documents, laboratories results),

- \*- Evaluation of knowledge, filling of gap, setting up of a plan for sampling and analysis,

- \*- Analysis of a certain number of samples by african and european laboratories participating in the project, according to financial and material available means. The validity of the results of these laboratories will be verified by analysis on reference samples exchanged among them. More accurate analysis (amino acids, fatty acids, vitamins, antinutritional factors...) will be done by one or several laboratories involved in the project, on freeze-dried samples,

- \*- Collection , computerization and statistical analysis of data, edition of tables for each country and/or for Central and Western Africa as a whole.

This program will particularly take into account, foods known by old persons but which are unknown by young people as well as urban populations. These kind of foods are progressively forgotten, with a risk of disappearing for ever. If means allow, an emphasis will be put on these foods which enrich the patrimony of genetic resources.

The program will also give an opportunity to study the influence of conservation and transformation processes on food composition.

It's clear that this entreprise will not be realised in its entire scope without the participation and collaboration of the different

teams above, and without financial help from ECC or other organizations.